

a
1 claims

What is claimed is

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1. ~~Prefabricated buildings or houses according to a modular steel frame construction method substantiated by the fact that the modular steel frame construction method consists of the combination of a ceiling frame (6), of a floor frame (1) and of Z-shaped sections welded inside the floor frame (1) in order to form flanges, of the floor layer (3), of a twinned pillar (4) with interconnecting welded bridges, the pillar being connected to the floor frame (1) and the ceiling frame (6) by the use of a transverse bearer (7) and of pins (5).~~

2. ~~Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claim 1, substantiated by the fact that the floor frame (1) consists of a standardized section C 160, St 37 or St 52 or/and other possible sections and that it is bevelled and welded.~~

3. ~~Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 and 2, substantiated by the fact that Z-sections (2) as flanges or stays are welded on the inside of the floor frame (1) in a well-defined axial distance in order to fill the incurved part of the flange with concrete without reinforcing the latter.~~

4. ~~Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 3, substantiated by the fact that the floor layer (3) consists of concrete, d = at minimum 100 mm or more, and undermost of an insulating layer of pressed rockwool or a similar insulation material, d = at minimum 60 mm or more, that the floor layer (3) is mounted between the flanges (2) and that it is covered,~~

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without being reinforced, with B 25 or a concrete of superior proficiency grade.

5. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 4, substantiated by the fact that the twinned pillar (4) consists of two MSH sections 60/60/5, St 37 or St 52 and/or other conceivable sections and that they are interconnected by welded steel bridges 80/80/10 or other variants in dependence of the chosen section, and in an axial distance from each other conforming to the statics specifications.

6. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 5, substantiated by the fact that the twinned pillar (4) is connected to the floor frame (1) and the ceiling frame (6) through junction gussets in conformity with statics specifications.

7. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 6, substantiated by the fact that the number of the twinned pillars (4) is determined by statics requirements.

8. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 7, substantiated by the fact that the pins (5) consist of solid turned bars of St 37 or other conceivable materials, and that they are used for connecting vertically the twinned pillars (4) of two modules placed one on top of another.

9. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 8, substantiated by the fact that the combination of the twinned pillars (4) with the pins (5) ensures the accurate vertical and

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horizontal structure of the building by means of a simple plug-in connection.

10. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 9, substantiated by the fact that the ceiling frame (6) consists of an L-shaped sheet-steel section, St 37 or 52 or of other conceivable materials or sections.

11. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 10, substantiated by the fact that the ceiling frame (6) consists of an edged or rolled L-section 250/75/5 or other conceivable sections.

12. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 11, substantiated by the fact that the frames (1) and (6) are bevelled and welded at their angles or corners.

13. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 12, substantiated by the fact that C 60, C 80 or other sections (transverse bearer) (7) are welded into the ceiling frame, perpendicular to its longitudinal direction and in an axial distance depending upon statics specifications.

14. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 13, substantiated by the fact that the combination of the ceiling frame (6) with the floor frame (1) generates a twinned beam (9) allowing a cantilever span of up to 14 m.

15. Flange or stay strengthener (inserted passage)

17. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in one of the preceding claims, substantiated by the fact that a combination of the roof frame (10) with the floor frame (1) and the transverse bearers (7) is practicable.

19. Prefabricated buildings or houses according to a modular steel frame construction method as claimed in claims 1 to 18, substantiated by the fact that it is possible to build houses with a variable number of stories.

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